



THE RESPONDER

TEXAS GENERAL LAND OFFICE • JERRY PATTERSON, COMMISSIONER
OIL SPILL PREVENTION AND RESPONSE PROGRAM • OCTOBER 2014



GLO Expands TABS Monitoring Capability

A new 2.25-meter buoy marks the latest Texas General Land Office (GLO) effort to protect our coast and the western Gulf of Mexico from oil spills that threaten sensitive habitats. Located 65 miles (136 deg.) off Port Aransas in a previously unmonitored area of the Gulf of Mexico, the buoy completes the moored network of offshore sensing devices called the Texas Automated Buoy System (TABS).

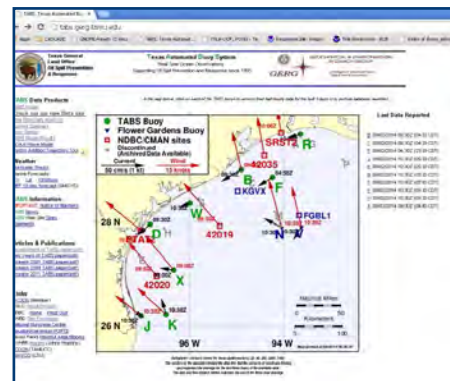
In 1995, Texas became the first state to fund and deploy a coastal real-time reporting and monitoring network. Since then, Texas has arguably enjoyed the most continuously and thoroughly monitored coastline in the United States. The GLO funds the construction, deployment, and maintenance of TABS and remains at the forefront of ocean monitoring and observation. The system now consists of eight permanently moored buoys with surface and subsurface current monitoring, as well as a host of other meteorological instruments.



Buoy X being deployed in 970 feet of water off the Texas coastline.

Augmenting the buoy system are two private moorings near the Flower Gardens National Marine Sanctuary, funded through a Joint Industry Project with oil and gas operators. All of the buoys feed information into the TABS database, which is maintained by the experts at Texas A&M University's Geo-

chemical and Environmental Research Group. The data generated is used in conjunction with the Regional Ocean Modeling System to help predict the trajectory of oil spills. This data has also been used to help predict the movements of harmful algal blooms, ships adrift at sea, drugs jettisoned by smugglers, and even missing persons.



TABS buoy locations protecting the Texas coast.

The new buoy location has been set at site X, and is moored at a depth of 970 feet (295m). The buoy is running the next generation code for GLO buoys, and along with the standard near surface-current meter, is equipped with a 150 kHz Acoustic Doppler Current Profiler, collecting data every 30 minutes down to a maximum depth of 970 feet.

The GLO TABS network and modeling capabilities have been used in over 67 events involving actual and potential oil spills along the Texas coast, in addition to countless drill run scenarios. The Oil Spill Division of the GLO stands ready to employ these tools to help prepare for and respond to threats to our shores. For more information on TABS please contact Steven Buschang, Director of Research and Development and Scientific Support Coordinator at 512-475-4611.

TABS Facts*

- ◆ Since its inception, there have been 349 TABS deployments, 329 recoveries (9 currently deployed)
- ◆ The system with the most days at sea is S/N 50040 which has been deployed 3,610 days at sea (10.11 years)
- ◆ The most deployments and recoveries have taken place on

R/V Gyre (66 deployments, 57 recoveries)

- ◆ The site with the most deployments is site B with 52 deployments totaling 6,410 days of data (17.56 years)
- ◆ The longest single deployment took place between August 19, 2010 and September 4, 2012 (747 days)

* As of 06/10/2014

TABS Facts – Courtesy of John Walpert, Senior Research Associate, Technical Lead Supervisor Ocean Technology Group, GERG Texas A&M University

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Teach the Teachers Program-Port Isabel

Teaching Environmental Science, also known as Teach the Teachers, is a program designed to help teachers in the K-12 setting who want to learn new ways to integrate environmental issues into their instruction. The purpose of the course is to increase the teacher's understanding of environmental concepts and principles regarding air, water, and waste management while promoting a clean and healthy environment. Additionally, this opportunity promotes partnerships among teachers, government agencies, and community organizations while ensuring that students become knowledgeable, environmentally conscious citizens in the future.

On July 17th, members of the Texas General Land Office Oil Spill Prevention and Response Program hosted the event for the 12th consecutive year. The day began in a classroom-like setting where GLO Area Manager Raymond Oliveira gave a presentation to 25 teachers who are currently working on obtaining Master's Degrees in Biology & Education at the University of Texas-Brownsville. Oliveira discussed the Oil Spill Prevention and Response Program and its numerous environmental programs such as the Derelict Vessel and Structure Program and the Port Isabel Bilge Reclamation Facility.



GLO Scientific Support Coordinator Steve Buschang discusses the ecology of South Bay with participants in the Teach the Teachers Program.

He also talked about the obligations of being a responsible vessel owner and operator, and the importance of keeping bilge oil out of Texas coastal waters. After the presentation, the program participants traveled to Port Isabel, where GLO personnel took the teachers on a field trip to environmentally sensitive South Bay, the southernmost bay system in Texas.

This pristine habitat is leased to the Texas Parks and Wildlife Department (TPWD) by the GLO to promote conservation and public awareness. The GLO and TPWD have been authorized by the state to develop a wetlands conservation plan and work together to monitor boat traffic, water quality, dredging activities, and pollution throughout the preserve. The teachers were given airboat tours through mangrove-lined trails while State Scientific Support Coordinator Steven Buschang discussed the history and ecology of South Bay.

Year after year, teachers say being able to participate in the GLO - Teach the Teachers Program lives up to its growing reputation as being both an exciting and educational endeavor.

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**Report oil spills
1-800-832-8224
24 hours**

The Responder is published by the Texas General Land Office.
Questions and comments may be submitted to Angela Jarvis
via email at angela.jarvis@glo.texas.gov
or by phone at 281-470-6597.

2013 OSPRA Award Winners

For 17 years the General Land Office has recognized companies and individuals for their efforts to go beyond the required provisions of the Oil Spill Prevention and Response Act, or to take proactive steps to enhance the protection and preservation of our coastal resources.

The following individuals were recently chosen by the OSPRA Award Selection Committee:

OSPRA Award for Lifetime Achievement

Dr. David A. Jensen, Retired Director of the National Spill Control School, Texas A&M University - Corpus Christi

OSPRA Award

Mr. Kelly Scott, Texas A&M Forest Service

OSPRA Award

*Lt. Patrick A. Marshal, U.S. Coast Guard,
Sector Corpus Christi*

Congratulations to this year's winners!

Responding to Spills, “Outside the Lines”

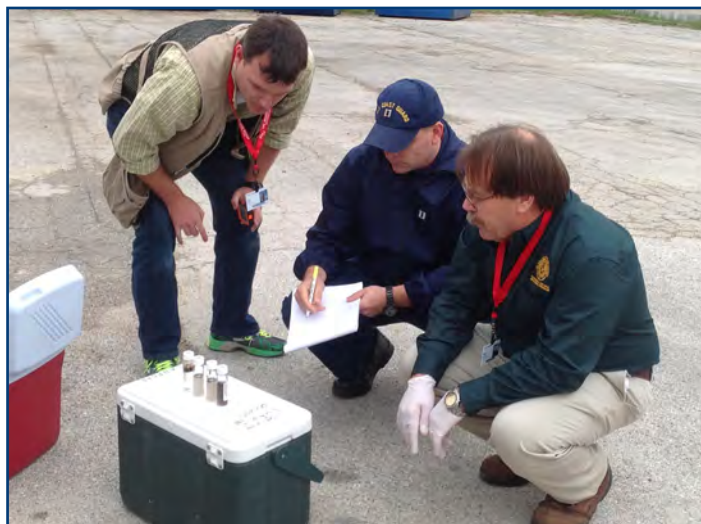
As most seasoned oil spill responders know, there is often not a predetermined or ordained way of responding to a spill. Sometimes the response follows well-established tried and true protocols and procedures. However, at other times protocols and procedures are discarded or amended to fit the needs of the day. Being ready to listen, test, evaluate, and use some creative engineering to support the event often makes the difference between success and failure. In the recent Texas City Y Oil Spill, which originated just off the Texas City Dike in Galveston Bay and heavily impacted the sensitive areas of the Aransas National Wildlife Refuge, and more specifically, the lesser known Matagorda Island Refuge, spill responders of the Texas General Land Office were faced with a number of challenges and decisions that tested the state's and nation's best spill responders.

A unified command was set up on the afternoon of March 22 in Texas City, in typical well-rehearsed, exemplary fashion with the oil following its projected trajectory and traditional spill response developing. Early trajectories made by both the GLO State Scientific Support Coordinator (SSC) and NOAA showed the spill leaving the Galveston Bay watershed and heading for nearshore waters. As predicted, the spill caught the long-shore south bound current and targeted areas belonging to the Aransas National Wildlife Refuge. The Aransas National Wildlife Refuge is home to a number of endangered species including just over 300 of the last remaining Whooping Cranes that make up the central flyway population. Note: Only 101 of the cranes exist in the wild outside this area.

Early into the response, members of the planning section were tasked to look at alternative methods for spill response. With the spilled oil having a specific gravity of .86 - 1.01 (from the MSD sheet provided) and given that some time had passed since the oil had “hit the water,” the state and federal SSCs indicated the use of dispersants would not be a viable option. However, as the spill approached the sensitive areas mentioned above, the Unified Command began to ask, again, about dispersants to help protect these areas.

Through a collaborative effort with MSRC, CTEC and NOAA, the GLO SSC asked for and received samples of the freshly spilled oil and a sample of weathered oil collected from the water near the spill site on March 23. Additionally, he requested a small amount of an EPA-approved dispersant, Corexit 9500, listed on the EPA products schedule. With the assistance of NOAA, the U.S. Coast Guard, and a cleanup operator, the GLO led a tailgate test that confirmed the recommendation that dispersant application was not a viable response method for the offshore spill. A report was submitted to the Unified Command, and no further action was taken on the use of dispersant applications.

Similarly, when the oil came ashore on Matagorda Island Refuge, the Environmental Unit was again asked to look at ways to minimize impacts to the sensitive areas and wildlife. An in-situ burn plan was considered and formulated, this plan called for, in part, the collection of much of the oiled woody debris that was found over much of the impacted area. Much of this debris had been coated with oil that had come ashore the prior day. Though the material looked to be a good candidate for this kind of response, the SSCs ordered up a representative sample for a test to make sure. Members of the Aransas National Wildlife Refuge fire team were enlisted to assist with the test, given their expertise and knowledge of the island and burning activities. A burn test was conducted on the



GLO, NOAA and USCG personnel evaluating dispersant efficacy on an oil sample.

representative material on the morning of March 31. The burn test indicated that the material would be difficult to ignite and unlikely to result in a sustained burn. It was hypothesized that the oil coating had lost its volatiles and held the moisture within the woody debris. Additionally, humidity levels were high, approximately 95 percent, which also resulted in a less than optimal condition to perform this type of debris removal. It should be noted that the process and procedures associated with in-situ burning of debris is a sound and well-established method, but the conditions of this particular spill negated the desired outcome. The results of this and similar “tailgate” tests saved many man hours of labor, equipment and other resources, which ultimately would have had a minimal impact on the overall cleanup effort.

Finally, there was another problem hampering response efforts that needed non-traditional thinking. Back in Galveston, an inlet alongside Galveston Bay known as “the Lagoon” was continually reimpacted with floating oil on each tidal flux. Consideration was given to close this cut with natural sand material which was later scrapped due to the high velocity of water that moved through the neck of the inlet. Traditional booms and sorbent materials were not able to do the necessary job due to the varying levels of tide, velocity of the currents, and the viscous nature of the oil. An oil spill responder, remembering that crab traps with loosely packed sorbent materials had once been used as a shoreline barrier, came up with

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Dog kennels with adsorbent snare after deployment.

Responding to Spills, “Outside the Lines”

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a unique idea for utilizing adsorbent snare. Oil snare has properties that made it particularly useful on this highly viscous spilled oil. The responder conceptualized using the adsorbent snare inside of common dog kennels, which would then be hung from the bridge that spanned the entrance to the lagoon. These would be lowered and adjusted according to tide and current allowing the majority of the current to flow unobstructed under the kennels. These worked exceedingly well!

All-in-all a well-executed response is one that not only incorporates pre-planned elements, and executes, as a well-oiled machine, but one that also has the flexibility to look at the specific response needs and evaluate, test, and try them, resulting in a

response which may have just been waiting on the sidelines, or just outside the lines.

Special thanks to the NOAA SSCs; Lt. Aaron Jozsef of the USCG Strike Team; Scott Miles, LSU Chemist; James McCormack, ECM Projects Team Member; and Tim Archer, MSRC.



In-situ burn test.

GLO Launches Refurbished Coast Guard Vessel

The Texas General Land Office Oil Spill Prevention and Response Program has launched a new vessel—GLO 225—for oil spill prevention and response operations. Starting in July after a four-month refurbishment/retrofit, the 25-foot Defender “B” Class - Safe Boat, previously operated by the U.S. Coast Guard, has a new mission. It replaces a 25-foot Sea Ark, which had reached its service life limit. This left a void in the ability to operate in more adverse weather conditions. Through an agreement with the Texas Forest Service, the GLO was able to obtain the surplus vessel from the Coast Guard.

Her new mission will be to augment the capabilities of the GLO’s Region 2, based in La Porte, to respond to spill events and conduct pollution prevention operations. “Equipped with radar, AIS and side-scan sonar, we are now better prepared to meet today’s challenges

in our rapidly changing world of oil spill prevention and response,” said Richard Arnhart, Region 2 director. “We’ve taken it out on patrols in the Houston Ship Channel and other areas needing our attention. We can now arrive on location quicker, safer, and not soaking wet due to water coming over the bow. One of the best features is the shock absorbing seats. Not getting beat to death in rough weather makes for a much better ride with less fatigue at the end of the day. This vessel has exceeded our expectations.”



Texas General Land Office vessel 225.

The Importance of Contingency Plans

Contingency plans are developed to safeguard and prepare companies in the event of a disaster. They lay out the strategy for responding quickly and effectively to an event to minimize personnel injury and/or death, damage to the environment, business disruption, loss of revenue, embarrassment, penalties and additional regulations. The role of the Texas General Land Office Oil Spill Prevention and Response Program is more than just regulatory authority for preventing oil spills. The agency conducts and participates in numerous facility/vessel spill exercises, audits and inspections to promote a positive working relationship and ensure the accuracy and effectiveness of contingency plans.

Whether developed by company employees or external plan writers, the first and foremost priority is that the plan be available and understood by everyone involved. As valuable a tool as it is, if it doesn’t remain functional and updated, it will sit on a shelf and gather dust. As a general rule, contingency plans should be tailored to the vessel or facility for which they will be used. A one-plan-fits-all approach may not be as effective when an unauthorized oil discharge occurs.

The following are the top 10 problems observed during contingency plan reviews:

- ◆ Unable to locate contingency plan

- ◆ Plan contains incorrect contact numbers
- ◆ Emergency numbers go to a voice mail box
- ◆ Drill logs are not maintained
- ◆ Data is inaccurate
- ◆ GPS locations don’t match the facility
- ◆ Plan contains an outdated personnel list
- ◆ Plan is generally unorganized
- ◆ Description and maps of environmentally sensitive areas are missing
- ◆ Unrealistic response strategies to contain and clean a worst case discharge

Developing and maintaining an adequate contingency plan is hard work, costly and time consuming. Significant importance must be placed on this task for it to be done effectively. Plans should be periodically tested to the greatest extent possible. After the test, modifications should be made based on gaps, lessons learned or unforeseen contingencies discovered as a result of the test. Some companies may be tempted to play the odds and forego the extra effort of creating a solid contingency plan. However, given that a company’s very survival may be at issue, this investment is well worth the cost in both time and money.

Advanced Public Information Officer Course

The Texas General Land Office had an opportunity to send one of its Oil Spill Prevention and Response regional directors, Richard Arnhart, to the Advanced Public Information Officer (APIO) training at the National Emergency Training Center in Emmitsburg, Maryland. The course teaches how to apply public information skills to a major emergency or disaster situation. This is done through a series of lectures and exercises over a four-day period.

Instruction included Legal Issues in Public Information, Public Information and Public Policy, Risk Communication, Interpersonal Skills for Public Information Officers, Conflict Resolution, Communicating Effectively during an Emergency, Media Relations, Social Media, Emergency Information Systems, Stress Management for PIOs and a Joint Information Center exercise was offered. Students must have completed FEMA's Basic Public Information Officers course (G290) at the state level before they attend the Advanced Public Information Officer course (E388).

"The best word to describe this course is intense," Arnhart said.

"They have assembled some of the finest instructors in the country to take you through the processes that one would expect to see during an emergency event. We had a class of 42 Public Information Officers from all over the country coming together to learn new skills and work in a simulated Joint Information Center. When this four-day course ended, we had developed into a pretty tight-knit group, working together and ready to deal with the emergencies as they occur."



Students discussing and critiquing an interview.

Clean Gulf Conference Returns to San Antonio

Greg Pollock, Deputy Commissioner of the Texas General Land Office Oil Spill Prevention and Response Program, invites you to join the biggest reunion in North America for oil spill response professionals. The 24th annual Clean Gulf Conference & Exhibits will be held in San Antonio Dec. 2 - 4 and brings together the latest trends and best practices in response operations. Key professionals and decision makers from throughout the Gulf Coast and beyond converge to discuss the latest trends and best practices in response operations. Attendees will walk away with viable solutions they can incorporate to safely produce and transport petroleum products and effectively respond when a spill occurs. In addition to outstanding conference sessions, the exhibit

floor will feature more than 150 experienced companies ready to assist you with new solutions and technologies that will work best for your organization.

Don't miss your chance to access over 2,000 oil spill prevention and response professionals and meet with outstanding exhibitors on the show floor. Visit www.cleangulf.org or contact Debbie Saenz – Outreach and Education Coordinator at debbie.saenz@glo.texas.gov or by phone at 512-475-1466, or Kayla Sparks at kaylas@tradefairgroup.com or by phone at 713-343-1869.

The 2014 Toolkit will be released at Clean Gulf. Make sure to stop by the General Land Office Oil Spill booth to get the updates.

GIS Hero – Sterling Harris

Sterling Harris, Manager of GIS Services in the Information Services Division of the Texas General Land Office, was recently recognized by Environmental Systems Research Institute, Inc., "ESRI" as a GIS Hero. ESRI, headquartered in Southern California and with offices worldwide, develops geographic information systems (GIS) that function as an integral component of nearly every type of organization. Harris was recognized as part of an ongoing series honoring individuals who have made a difference in the world by applying a GIS solution to conservation or community challenges.

In 1991, the Texas Legislature passed the Oil Spill Prevention and Response Act, and funding from this legislation allowed the GLO to acquire GIS for contingency planning and response. Under the direction of Harris, GIS Services has been a vital part in the GLO's Oil Spill Prevention and Response Program

and assisted with many projects, including the Texas Coastal Oil Spill Planning and Re-

sponse Toolkit. In March, this toolkit was used extensively to manage the Texas City Y Spill in Galveston Bay and proved to be an invaluable resource. The Oil Spill program is thankful to Harris and his GIS team for improving the way we prepare for and respond to oil spills.



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